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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,274	03/08/2005	Hisayoshi Fujimoto	10921.0289USWO	9570
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EXAMINER				
HSU, AMY R				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/527,274

Applicant(s)

FUJIMOTO ET AL.

Examiner

AMY HSU

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 8-11, 14, 16-21 and 23 is/are rejected.
- 7) ☒ Claim(s) 4-7, 12, 13, 15 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/888)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-23, with claim 24 noted as being canceled, have been considered but are moot in view of the new ground(s) of rejection.

The amendments to the claims narrow the meaning given to the claims to a great enough degree to render the first rejection, and consequently the arguments regarding the first rejection as moot, and also require a new search which results in new grounds of rejection as follows below.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-3, 10-11, 19-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Morley (US 6975358).

Regarding Claim 1, Morley teaches an image sensor module comprising: a case (*Col 1 Lines 34-35*); a photoelectric converter positioned within the case and having a light receiving surface (*Fig. 1 reference number 20, imaging array*); and a first optical unit provided within the case and forming an image of a subject on the light receiving surface of the photoelectric converter (*reference number 26*), the first optical unit providing a first light path (*Fig. 1 the arrow from "W"*) and; a second optical unit provided within the case and forming an image of the subject on the light receiving surface of the photoelectric converter (*reference number 14*); the second optical unit providing a second light path different from the first light path (*Fig. 1 the arrow from "N"*), the second optical unit being optically separate from the first optical unit for preventing light passing along the second light path from passing along the first light path (*Col 2 Lines 11-12 teaches that only one of the paths is activated at a time which means light from one path will not interfere with light from the other*); wherein switching is possible between imaging of the subject using the first optical unit and imaging of the subject using the second optical unit (*Col 2 Lines 5-7 teaches the user may control which of the two optical units is active*).

Regarding Claim 2, Morley teaches an image sensor module according to claim 1, wherein the first and second optical units include a first lens unit and a second lens

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unit, respectively (*Fig. 1 reference number 26 and 14*), the second light path from the second lens unit to a second position where the image of the subject is formed is longer than the first light path from the first lens unit to a first position where the image of the subject is formed (*the path from reference number 14 to reference number 20 is longer than the path from reference number 26 to reference number 20*).

Regarding Claim 3, Morley teaches an image sensor module according to claim 1, wherein the first optical unit is employed for standard imaging, and the second optical unit is employed for standard imaging with a narrower view angle during imaging than the first optical unit, or for telescopic imaging (*Col 1 Lines 45-46*).

Regarding Claim 10, Morley teaches an image sensor module according to claim 2, wherein the first optical unit has an optical axis extending linearly from the image-forming lens to the first position, and the second optical unit has a bent optical axis extending from the image-forming lens to the second position (*as seen in Fig. 1*).

Regarding Claim 11, Morley teaches an image sensor module according to claim 10, wherein the second optical unit includes light-reflecting means for reflecting light an even number of times (*reference number 16, the mirror is a light reflecting means which causes the light to reflect from reference number 12 to reference number 16 which is once, and from reference number 16 to reference number 20 which is a second time, or an even number of times*).

Regarding Claim 19, Morley teaches an image sensor module according to claim 2, wherein the second position is closer to the first position than it is to an incident optical axis of the second optical unit (*the first and second position is where the image is formed which is at reference number 20, the two positions are closer to each other than the second position is to reference number 14*).

Regarding Claim 20, Morley teaches an image sensor module according to claim 2, wherein an incident optical axis of the second optical unit is closer to the first position than it is to the second position (*as seen in Fig. 1*).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 8-9, 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morley (US 6975358) in view of Yamamoto (US 6907139).

Regarding Claim 8, Morley teaches an image sensor module according to claim 2, but does not teach the first and second positions each have an image sensor chip.

Yamamoto teaches a system with two optical systems (*Col 2 Lines 38-43*) each with an image sensor positioned in front of each optical system (*Fig. 2 shows two optical systems each with its own image sensor*).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teaching of Morley with that of Yamamoto to realize an image sensor apparatus with two optical systems having two image sensor chips because this is a well known configuration in the art and would have been obvious to try for other options such as capturing two images simultaneously from each of the optical systems.

Regarding Claim 9, Morley in view of Yamamoto teach an image sensor module according to claim 8. Morley teaches use of the first and second optical paths is switchable, however realizing the invention addressed with Claim 8 would also correspond to the on-off drive of the first and second image sensor chips is switchable, along with activating the shutter of one or the other optical systems.

Regarding Claim 23, Morley teaches an image sensor module according to claim 21, wherein the photoelectric converter comprises first through third image sensor chips provided in corresponding relationship to the first through third optical units (*as addressed with claim 21, it would have been obvious to realize a third optical unit and third image sensor chip with the same rationale as claim 8*).

6. Claims 14, 16-18, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morley (US 6975358).

Regarding Claim 14, Morley teaches an image sensor module according to claim 11, wherein the light-reflecting means includes a mirror (*reference number 16*) but does not teach a plurality of mirrors. Official notice is taken that multiple mirrors are common within an imaging and optical system. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teaching of Morley to incorporate more than one mirror to broaden the options regarding the shape of the optical path.

Regarding Claims 16 and 17, Morley teaches an image sensor module according to claim 2, however does not teach the second optical unit has fewer lenses than the first optical unit, or size of apertures. Official notice is taken that it is common to have multiple lens groups with variable number of lens or lenses within each lens group, and aperture sizes are variable for optical systems. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teaching of Morley to use different number of lenses and aperture sizes within the first and second optical unit to suit the user's need for angle of view and zooming distance.

Regarding Claim 18, Morley teaches an image sensor module according to claim 2, however does not teach the image-forming lens of at least one of the first and

second optical units is positionally adjustable in the optical axis direction. Official notice is taken that zoom lenses are extremely common to be used in imaging systems, and zoom lenses are adjustable in the optical axis direction.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teaching of Morley to use zoom lenses instead of fixed lenses to give the user greater range of control.

Regarding Claim 21, Morley teaches an image sensor module according to claim 1, but does not teach a third optical unit provided in the case and having an optical path different from the optical paths of the first and second optical units for forming an image of the subject on the light receiving surface of the photoelectric converter, wherein switching to imaging of the subject using the third optical unit is possible in addition to imaging of the subject using the first and second optical units.

However, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teaching of Morley to add an additional optical unit which can be switched to for imaging besides the first and second optical units. Since Morley teaches the concept of different optical systems with different optical paths from one another and switching between the different optical systems, it would not change the concept of that taught by Morley to add another optical system. Adding another optical system in modification to Morley would yield predictable results, given the teaching of Morley.

Allowable Subject Matter

7. Claims 4-7, 12-13, 15, 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kato et al. (US 7034882) teaches a photographic lens system for forming an object image.

Bates et al. (US 6930707) teaches a digital camera with optical system.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AMY HSU whose telephone number is (571)270-3012. The examiner can normally be reached on M-F 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on 571-272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Amy Hsu
Examiner
Art Unit 2622

ARH 6/16/08

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/Lin Ye/
Supervisory Patent Examiner, Art Unit 2622